

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION**

TRANS TECHNOLOGIES
COMPANY,

Plaintiff,

v.

HENDRICKSON USA L.L.C.;
QUEST GLOBAL, INC.; GREAT
DANE LIMITED PARTNERSHIP,

Defendants.

**CIVIL ACTION NO.
1:16-cv-01778-AT**

JURY TRIAL DEMANDED

**DEFENDANTS' JOINT OBJECTIONS TO SPECIAL MASTER'S REPORT
AND RECOMMENDATION ON CLAIM CONSTRUCTION UNDER
MARKMAN V. WESTVIEW INSTRUMENTS, INC.**

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INTRODUCTION

On June 16, 2017, the Special Master issued his Report and Recommendation on Claim Construction under *Markman v. Westview Instruments, Inc.* in this patent case between Plaintiff Trans Technologies Company and Defendants Hendrickson, Great Dane, and Quest Global. (Dkt. 145.) Although the Special Master’s claim constructions establish dispositive grounds for summary judgment of non-infringement on all of the asserted claims of the patent-in-suit, U.S. Patent No. 7,669,465 (“the ‘465 Patent”), Defendants submit these objections to preserve their rights in accordance with Federal Rule of Civil Procedure 53(f)(2).¹

Accordingly, Defendants respectfully object to the Special Master’s Report and Recommendation regarding the proposed constructions of claim language related to the (1) check valve, (2) air shaft extending through the hub cap, (3) injecting means, and (4) releasing means. In support hereof, Defendants rely on all matters of record to date, including the following documents:

¹ For example, the accused Hendrickson TIREMAAX® PRO tire inflation system does not meet claim limitations requiring: (a) relief valves within a rotary air chamber, or (b) a rotary air chamber secured to a hub cap. Defendants also note that TransTech’s infringement allegations will likely become moot in light of Defendants’ recent invalidity challenges to the claims in an *inter partes* review before the Patent Office, filed May 31, 2017, and their corresponding motion to stay this case, filed July 5, 2017. (*See* Dkt. 151.)

- 1) The parties' Joint Claim Construction Statement (Dkt. 108);
- 2) Defendants' Opening Brief on Claim Construction (Dkt. 114, including exhibits);
- 3) Defendants' Response Brief on Claim Construction (Dkt. 121, including exhibits, 122-1);
- 4) The transcript of the May 11, 2017 Hearing on Claim Construction (Dkt. 143); and
- 5) The Special Master's Report and Recommendations dated June 16, 2017 (Dkt. 145).

Defendants reserve, and do not waive, the right to pursue all previously proposed claim constructions and arguments in subsequent proceedings.²

I. LEGAL STANDARD

In construing patent claims, the Court (and the Special Master) must look first to the claims of the patent itself, then to the patent's specification, and then, if in evidence, to the patent's prosecution history. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312- (Fed. Cir. 2005) (*en banc*). To assist in construing the claims in the context of the specification and the prosecution history taken as a whole, the Special

² In particular, Defendants reserve the right to argue indefiniteness, lack of written description, and inoperability of the claims in light of the Special Master's position that such issues may not relate to claim construction, and, therefore, "the Special Master makes no recommendation in this regard." (*See* Dkt. 145 at 15.) Defendants further intend to respond to TransTech's objections to the Special Master's report in accordance with an anticipated joint proposal for a briefing schedule.

Master may also look to sources such as dictionaries. *Id.* at 1317-1318. The Special Master may also consider evidence extrinsic to the patent itself, such as the testimony of experts concerning the plain and ordinary meaning of the claim terms to one of ordinary skill in the art. *Id.* at 1318. Rule 53 of the Federal Rules of Civil Procedure further provides that both the Special Master’s legal conclusions and any factual findings are subject to *de novo* review by the Court. F.R.C.P. 53(f)(3), (f)(4).

II. OBJECTIONS

A. Check valve

Defendants respectfully object to the Special Master’s proposed construction of “check valve” as “a valve, having an open position and a closed position, and that may be biased towards one position, which bias may be overcome by external force such as pneumatic or mechanical force.” (*See* Dkt. 145 at 11-12.) The Special Master’s construction is overbroad and not supported by the ‘465 Patent. The Court should give “check valve” its conventional meaning of a “one-way pressure responsive valve...,” as Defendants proposed. (*See, e.g.*, Dkt. 114 at 10-15, Dkt. 121 at 5-10.)

Each asserted claim of the ‘465 Patent requires a “check valve.” As Defendants explained throughout the claim construction process, the ‘465 Patent does not explicitly define the term check valve to have a meaning distinct from its

ordinary meaning – a one-way valve that prevents backflow. (*See* Dkt. 114, Ex. 1, Col. 4:10-12, 4:19-21, Dkt. 114 at 10-15, Dkt. 121 at 5-10.) The patent does not state a check valve may be a two-way valve, nor does it state or disclose a mechanically held-open valve, as proposed by TransTech and as adopted the Special Master’s claim construction.

To the contrary, the ‘465 Patent itself shows that “check valve” should retain its conventional meaning known in the art as a one-way valve. The ‘465 Patent specification explains that the “[c]heck valves **41** operate *to cause air to flow into the tires 11* when the tire **11** air pressure drops below the desired pressure.... .” (Dkt. 114, Ex. 1, Col. 4:2-4, emphasis added.) The check valves operate to cause air flow *toward* the tires to maintain tire pressure. The ‘465 Patent further confirms that the check valves maintain pressure by allowing flow *toward* the tires only (*i.e.* in one direction, and not in the reverse direction) by referring to the check valve synonymously as a “non flow-back” check valve, meaning that it allows flow in only one direction. (*See id.*, Col. 4:19.)³

³ Defendants directly relied on the ‘465 Patent’s reference to valve 41 as a “non flow-back check valve” in support of their proposed “check valve” claim construction. (Dkt. 114 at 11, citing ‘465 Patent, Col. 4:19). This disclosure, which the Special Master’s report does not address, contradicts TransTech’s claim construction position and the Special Master’s recommended construction.

The adjacent claim language requiring that each check valve is “configured to inject air into a corresponding tire when tire air pressure drops below a first adjustable preset value...” confirms that the check valve must be pressure responsive, as proposed by Defendants. The claim says the check valves must be “configured to *inject* air ... *when* tire pressure drops”; there is a causal relationship between the check valve and the “configured to...” clause. *See Am. Calcar, Inc. v. Am. Honda Motor Co.*, 651 F.3d 1318, 1340 (Fed. Cir. 2011) (holding term “when” in patent claim required “cause-and effect relationship”). In other words, to give the “configured to” clause meaning, the check valves must operate in response to tire pressure. *See K-2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 1363 (Fed. Cir. 1999) (“[F]unctional language is, of course, an additional limitation in the claim.”).⁴ (*See also* Dkt. 114 at 35-37, Dkt. 121 at 8-10.)

The plain meaning of check valve – as a one way valve – is supported by well-recognized dictionaries defining a check valve as: “[a] device for automatically limiting flow in a piping system to a single direction” (Dkt. 114, Ex.

⁴ The Special Master stated that this specific phrase needs no further construction beyond the plain language of the claim (Dkt. 145 at 13-14), and Defendants agree that the plain language should be clear. In any case, the Special Master’s recommendation cannot be interpreted to read out the “configured to...” limitation from the claim. *See Wright Med. Tech., Inc. v. Osteonics Corp.*, 122 F.3d 1440, 1444 (Fed. Cir. 1997) (“Wright does not seek to interpret the claim terms... but [rather] seeks to eviscerate them”).

13, HEN000793); and “a directional control valve which permits flow in only one direction” (Dkt. 114, Ex. 14, TTech000488). TransTech’s own technical and claim construction expert (Dkt. 121, Ex. 30, Lehmann Dep. at 138:5-13, 139:14-144:24) and case law provide additional support for this meaning of check valve.

Hendrickson’s expert also confirmed the plain meaning of check valve as a one-way valve. (*See e.g.*, Dkt. 114, Ex. 15, Mucklerath Dep. 22:2-23:8; Ex. 21, ¶1; Ex. 15 at 42:7-44:14.) The Special Master cites TransTech’s argument that a one-way valve is merely one type of “check valve” (Dkt. 145 at 10-11), but a two-way valve is not a mere alternative – it is inherently inconsistent with the defining characteristic of a check valve – that it limits flow to one direction.⁵

It was legally incorrect for the Special Master to construe check valve only to preserve the validity of the ‘465 Patent. Controlling Federal Circuit precedent rejects this approach: “Claim terms should be given their plain and ordinary meaning to one of skill in the art at the relevant time and *cannot be rewritten by the*

⁵The examples cited by the Special Master (*id.* referencing Ingram and Hendrickson brochures) merely establish that additional structure can modify and disable a valve’s operation. The ‘465 Patent specification, however, contemplates a valve that operates – both to “cause air to flow” and as a non flow-back check valve contrary to the cited examples by the Special Master. Further, Hendrickson’s non-contemporaneous marketing materials are “of scant import.” *See Vasudevan Software, Inc. v. MicroStrategy, Inc.*, 782 F.3d 671, 678 (Fed. Cir. 2015).

courts to save their validity.” Hill-Rom Services, Inc. v. Stryker Corp., 755 F.3d 1367, 1374 (Fed. Cir. 2014) (emphasis added).⁶ Since the ‘465 Patent specification does not clearly indicate that the patentee intended to use a special meaning, the term “check valve” should be construed consistent with its plain and ordinary meaning: a one-way valve that “checks,” or stops, flow in one direction.⁷ The Court should not re-define the conventional meaning in order to attempt to preserve its validity where the patentee has not explicitly provided a special definition for the term. (*See, e.g.*, Dkt. 114 at 10-15, Dkt. 121 at 5-8.)

B. Air shaft extending through the hub cap

Defendants disagree with the Special Master’s proposed construction of the claim phrase air shaft “extending through” the hub cap in Claim 1 as “extending at least within a portion of the hub cap.” (*See* Dkt. 145 at 17-18.) The Court should

⁶ *Ruckus Wireless, Inc. v. Innovative Wireless Solutions, LLC*, 824 F.3d 999, 1004 (Fed. Cir. 2016), cited by the Special Master, does not apply. In that case, the court narrowed a claim term to avoid a claim broader than the supporting disclosure. *Id.* Here, the Special Master takes the opposite approach to broaden the claim to include an unsupported valve structure.

⁷ Defendants disagree with the Special Master’s statement that Defendants’ counsel “acknowledged that a check valve that is normally biased open exists.” (Dkt. 145 at n.5.) Counsel merely acknowledged that a generic valve – not a check valve – could be biased open. (*See* Dkt. 143 at 102-103.) Defendants do not agree that such a valve, which allows bi-directional flow, qualifies as a “check valve” because it would contradict the very definition of a check valve as a one-way valve.

adopt the plain meaning of “extending through” in the mechanical arts as “passing through a surface of the hub cap.” (*See also* Dkt. 114 at 20-22, Dkt. 121 at 4-5.)

The proposed construction impermissibly rewrites the plain meaning of the claim language and is inconsistent with the ‘465 Patent. The claim recites “extending *through*” the hub cap, not “extending at least within a portion’ of the hub cap.” Indeed, the Special Master correctly points out that “it is clear” that Figure 3 shows an air shaft that passes through the surface of the hub cap, consistent with Defendants’ proposed construction. (Dkt. 145 at 17.) However, the Special Master states incorrectly that “it is unclear whether the air shaft also passes through the hubcap” in Figure 5. (*Id.*) The patent explicitly states that the tire inflation system of Figure 5 operates the same as in Figure 3 (except for a bracket that is irrelevant here). (Dkt. 114, Ex. 1, Col. 4:37-39.) Further, the patent states “the air shaft 40 extends through the hub cap 24 and into the rotary air chamber 28.” (*Id.* at Col. 4:40-42.) The intrinsic evidence thus shows that the air shaft passes through the hub cap in all cases.

The Special Master’s reliance on the description in the specification of air flowing within, or “through,” a hose is misplaced. (*See* Dkt. 145 at 18.) While the Special Master is correct that air flows within the tubes and hoses, he neglects that, in doing so, the air flows both into and out of the hose. In addition, the use of the

word “through” in the context of air flow is different from the use in the claim.

The use in the specification describes the movement of air, whereas the claim describes the location of two mechanical structures, the air shaft extending through the hubcap. The description in the specification of air flowing within a hose is not applicable to the claim and cannot be used to rewrite the plain meaning of the claim language.

C. Injecting means

Defendants object to the Special Master’s proposed construction of the “means for injecting” clause of Claim 12 because, as discussed above, it incorporates the overbroad construction of “check valve” that includes a mechanically disabled valve. (*See supra* at Section II.A.) As with Claim 1, the check valve of Claim 12 operates “when tire pressure drops below a first preset value.” Similarly, “the means for injecting” should incorporate the check valve definition and the functional limitations required in Claim 1 – a one-way valve that operates in response to a drop in tire pressure below a preset value. (*See* Dkt. 114 at 29-35, Dkt. 121 at 16-19.)

The Special Master’s overbroad construction of “check valve” is particularly inappropriate in the context of a means plus function claim, which requires identification of the particular structure that the specification associates with the

claimed function. *See Cardiac Pacemakers Inc. v. St. Jude Medical, Inc.*, 296 F.3d 1106, 1113 (Fed. Cir. 2002). Because means-plus-function terms are limited to the structure in the specification, the “injecting means” does not include purported “check valve” structures not disclosed in the ‘465 Patent. *Fonar Corp. v. General Elec. Co.*, 107 F.3d 1543, 1551-52 (Fed. Cir. 1997) (structural claim covering reference to wave forms generally did not apply to means claims which must be limited to the specifically identified forms). The Special Master’s construction fails to limit check valve in accordance with the specification and effectively reads the term “check” out of the claims.⁸

Defendants further object to the Special Master’s proposed construction to the extent it does not include the complete structure the patentee chose to describe

⁸ For example, the Special Master surmised that the specification must “check” the escape of air from a tire (Dkt. 145 at 8-9), but does not provide a construction that is limited to such structure from the specification, i.e., the so-called “non flow-back check valve.” If the Special Master is correct that the valve disclosed by the specification of the ‘465 Patent is a two-way valve that “checks” (i.e., closes) to prevent the sudden loss of air in the event of a failed tire, for example, then the means-plus function claim must be limited to this specific valve structure from the specification. The Special Master’s reliance on structure outside the specification (i.e., Ingram’s mechanically held open valve) is also particularly improper for a means-plus-function limitation. *Default Proof Credit Card Sys., Inc. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1301 (Fed. Cir. 2005) (“[M]aterial incorporated by reference cannot provide the corresponding structure necessary to satisfy the definiteness requirement of a means-plus-function clause.”).

in connection with Figure 3 of its patent, as reflected in Defendants’ proposed construction, including:

- a non-rotating air pressure regulator in fluid communication with the rotary air chamber that supplies air based on the first adjustable preset pressure value;
- a rotary air chamber attached to a hub cap;
- a check valve that opens to permit air to flow into a corresponding tire in response to a drop in tire pressure that is below the pressure set by the regulator, and otherwise blocks flow from the tire; and
- the check valve is located within the rotary air chamber⁹.

(See Dkt. 114 at 29-35, Dkt. 121 at 16-19.) *See also Engineered Prods. Co. v. Donaldson Co.*, 147 F. App’x 979, 985 (Fed. Cir. 2005) (limiting claim to structure in specification because specification “clearly links or associates that structure to the function recited in the claim”); *Ballard Med. Prods. v. Allegiance Healthcare Corp.*, 268 F.3d 1352, 1359, 1361 (Fed. Cir. 2001) (“[T]he scope of the valve limitation must be confined to the valve structure disclosed in the specification, plus its equivalents.”).

D. Releasing means

⁹ Defendants’ proposed construction locating the check valve at the exit of the rotary air chamber raises indefiniteness issues that will be addressed separately.

Defendants agree with the Special Master that the releasing means includes “a relief valve located within a rotary air chamber” because this structure is explicitly required in the ‘465 Patent (Dkt. 114, Ex. 1, Col. 2:14-19). (*See* Dkt. 145 at 24-25.) However, Defendants object to the extent the Special Master’s proposed construction does not include the complete structure the patentee chose to describe in connection with Figure 3 of the ‘465 Patent, as reflected in Defendants’ proposed construction, including:

- a rotary air chamber attached to a hub cap;
- a relief valve that relieves pressure tire in response to tire pressure rising above a second adjustable preset value and recloses upon return to normal operating conditions; and
- the relief valve is located within the rotary air chamber.

(*See* Dkt. 114 at 39-42, Dkt. 121 at 19-22.) The ‘465 Patent describes this structure as carrying out the claimed function. *See supra* Section II.C *citing Engineered Prods.; Bennett.*

Defendants also note that the Special Master properly recognized that the claimed function of the “releasing means” is “releasing air from the tire when tire pressure rises above a second preset value.” (Dkt. 145 at 24.) The specification does not deviate from this requirement and repeatedly describes the relief valve as performing this function. (Dkt. 114, Ex. 1, Col. 2:16-19, Col. 3:65-67, Col. 4:16-17,

Col. 4:48-50.) In other words, the relief valve must release air and operate in response to tire pressure. This functional language is a limitation and cannot be read out of the claims. *See K-2 Corp.*, 191 F.3d at 1363.

E. Indefiniteness

Defendants explained that the relevant claim construction principles demonstrate that the asserted claims are indefinite. (*See, e.g.*, Dkt. 114 at 39-50, Dkt. 121 at 23-26.) Except to acknowledge the inherent ambiguity in the claims as written, the Special Master declined to address indefiniteness. (*See* Dkt. 145 at 11 [construing check valve despite ambiguity created by valve location]; 15 [declining to address indefiniteness]; 24 [acknowledging that valve locations may be critical for operability but failing to address effect on claim construction]; 26 [Claim 15 not disclosed in specification]; 26-27 [Claims 16 and 17 inconsistent with Claim 12].) In each instance, the Special Master did not address the arguments and evidence supporting indefiniteness. Because the Special Master declined to address indefiniteness issues, Defendants will defer and brief these issues on summary judgment, except to provide the following comments.

The means plus function limitations require identifying the structure the specification associates with the claimed function(s). *Cardiac Pacemakers*, 296 F.3d at 1113. Without corresponding structure, a means-plus-function claim does

not “inform, with reasonable certainty, those skilled in the art about the scope of the invention” or “afford clear notice of what is claimed, thereby ‘apprising the public of what is still open to them.’” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124, 2128-29 (2014).

As recognized by the Special Master, the “rotary air chamber is central to each embodiment of the invention” and is thus part of both the “means for injecting” and “means for releasing” (Dkt. 145 at 23-25; *see also* Dkt. 114, Ex. 1 at Abstract, Col. 1:66-2:4, Col. 2:12-19, Col. 4:13-17, Figs. 1-6.) The ‘465 Patent discloses only one rotary air chamber and valve structure, as shown in Figure 3.¹⁰ The check valves are located at the rotary air chamber exit, and the relief valves are upstream from the check valves. The relief valves cannot perform the claimed releasing function because the one-way (or non-flow back) check valves prevent air flowing from the tires through the relief valves. (Dkt. 114 at 39-42.) Since the claims are limited to the structure disclosed, and the structure cannot carry out the claimed function, the claims are invalid. *See Acacia Media Techs. Corp. v. New Destiny Internet Group*, 405 F. Supp. 2d 1127, 1138 (N.D. Cal. 2005) (“Patents claiming a system, are

¹⁰ TransTech does not and cannot point to any other structural disclosure regarding the operating components relating to the means clauses. The only alternative embodiment described in the patent relates to a bracket that is not relevant to these clauses. (*See* ‘465 Patent, Col. 4:36-39.)

indefinite under § 112 if the claim does not recite structural relationships of essential elements.”).¹¹

The Special Master’s construction of dependent Claims 15-17 also renders these claims invalid as indefinite. (*See* Dkt. 145 at 25-27.) Claim 15 includes a regulator that “rotates with the tire,” but the specification provides no disclosure of such a configuration. Claim 16 and 17 further defines the respective “injecting means” and “releasing means” with the rotary air chamber, which the Special Master recognized makes these claims irreconcilable with Claim 12’s narrower construction. (*See* Dkt. 114 at 48, Dkt. 145 at 26-27.)

Respectfully submitted this 7th day of July, 2017.

/s/ Lloyd Farr

Counsel for Defendants

¹¹ Claim 1 is indefinite under a similar analysis. The phrase “each check valve configured to inject air into a corresponding tire when air pressure drops below a first adjustable preset value” triggers § 112, ¶ 6 by “recit[ing] function without reciting sufficient structure for performing that function.” *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015) (*en banc*). Therefore, this claim term should be limited to the same disclosed structure as the corresponding term in Claim 12. (*See also* Dkt. 114 at 35-36, Dkt. 121 at 12-13.)

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CERTIFICATE OF SERVICE

I hereby certify that I electronically served, via the Court's Electronic Court Filing (ECF) system, the foregoing **DEFENDANTS' JOINT OBJECTIONS TO SPECIAL MASTER'S REPORT AND RECOMMENDATION ON CLAIM CONSTRUCTION UNDER MARKMAN V. WESTVIEW INSTRUMENTS, INC.** on all parties in this action as follows:

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This the 7th day of July 2017

/s/ Lloyd Farr
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